Audio System

Refer to Wiring Diagrams Cell 130 , Radio for schematic and connector information.

Special Tool(s)

ST1137-A	73III Automotive Meter 105-R0057 or equivalent

Inspection and Verification

1. Verify the customer concern by operating the electronic audio system with the engine running.
2. Visually inspect the following for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
● Audio unit ● Antenna or antenna cable ● Speakers mounting/speaker cones ● Radio ignition interference capacitor, radio frequency interference suppression bond or radio receiver hood bonding strap cleanliness	● Battery junction box (BJB) fuses: ■ 3 (40A) ■ 4 (40A) ■ 6 (40A) ● Central junction box (CJB) fuses: ■ 6 (20A) ■ 27 (25A) ■ 32 (15A) ● Ignition switch ● Circuitry ● Audio unit

3. If the concern remains and the fault is not detected, proceed to the Symptom Chart to continue diagnostics.

Symptom Chart

Symptom Chart

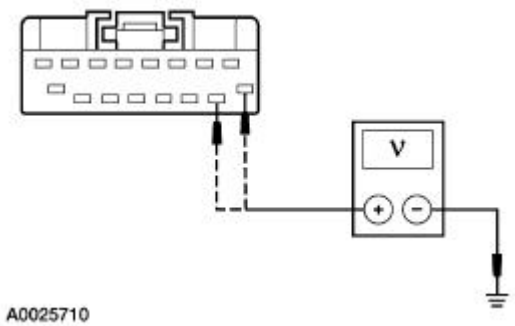
Condition	Possible Sources	Action
● The audio unit is inoperative/does not operate	● Central junction box	● Go To Pinpoint Test A .

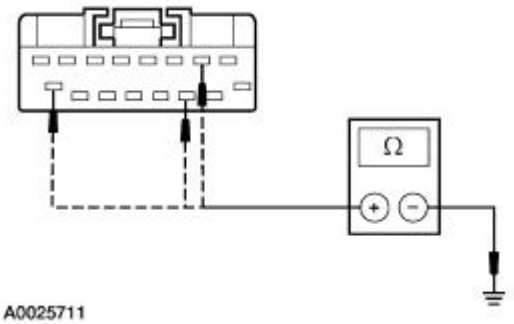
correctly	(CJB) fuses: ■ 6 (20A). ■ 27 (25A). ■ 32 (15A). ● Battery junction box (BJB) fuses: ■ 3 (40A). ■ 4 (40A). ■ 6 (40A). ● Circuitry. ● Audio unit. ● Ignition switch.	
● Audio unit display blank — audio unit operates	● Audio unit.	● REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
● Tape player only inoperative	● Audio unit.	● REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
● Poor reception	● Antenna connections. ● Antenna cable. ● Noise suppression equipment. ● Audio unit. ● Generator. ● Ignition system.	● Go To Pinpoint Test B .
● Poor reception — FM only	● FM signal out of range.	● INFORM customer of methods for obtaining best reception.
● Continuous SEEK/SCAN in AM/FM	● Antenna. ● Antenna connections. ● Audio unit.	● Go To Pinpoint Test C .
● No sound from one or more of the speakers — not all speakers	● Speaker(s). ● Circuitry. ● Audio unit. ● Subwoofer amplifier.	● Go To Pinpoint Test D .
● No sound from all of the	● Audio unit.	● Go To Pinpoint Test

speakers	• Subwoofer amplifier. • Circuitry.	E .
• Poor quality sound from one or more speakers (not all speakers)	• Speaker(s). • Circuitry. • Audio unit. • Subwoofer amplifier.	• Go To Pinpoint Test F .
• Poor quality sound from all speakers	• Audio unit. • Speaker(s). • Circuitry.	• Go To Pinpoint Test G .
• The subwoofer is inoperative	• Subwoofer. • Subwoofer amplifier. • Circuitry.	• Go To Pinpoint Test H .
• Loud popping when cycling the ignition switch	• Audio unit. • Circuitry.	• Go To Pinpoint Test I .
• One or more audio control buttons (such as volume, seek, tune and scan) are not functional in either radio, tape, or CD mode or all modes	• Audio unit.	• REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
• When the headlamp switch is in park or headlamp position and the ignition switch is in the RUN or ACC position, the audio unit back lighting is inoperative — all other I/P lighting functions are normal	• Circuitry. • Audio unit.	• REFER to Section 413-00 .
• The audio unit has two items that can be dimmed—the audio unit display and the control buttons; one dims and the other does not	• Audio unit.	• REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
• Irregular operation of display and indicator LEDs	• Audio unit.	• REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
• Response time between pressing any of the audio control buttons and system response is more than two seconds	• Audio unit.	• REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

Pinpoint Tests

PINPOINT TEST A: THE AUDIO UNIT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

Test Step	Result / Action to Take
A1 CHECK OPERATION OF THE AUDIO UNIT ● Key in ON position. ● Turn on the audio unit. ● **Is the audio unit display illuminated?**	**Yes** GO to A2. **No** GO to A4.
A2 CHECK FOR SOUND COMING FROM THE SPEAKERS ● Verify that sound is coming from all the speakers. ● **Is there sound coming from all the speakers?**	**Yes** GO to A3. **No** GO to Pinpoint Test C.
A3 CHECK THE AUDIO UNIT CONTROLS AND FEATURES ● Refer to the owner literature for audio system controls. ● Verify that the controls and features operate correctly. ● **Do the controls and features operate correctly?**	**Yes** System operation is normal at this time. **No** REMOVE the audio unit and SEND it to an authorized Ford audio system facility. TEST the system for normal operation.
A4 CHECK VOLTAGE AT THE AUDIO UNIT ● Key in OFF position. ● Disconnect: Audio Unit C290b. ● Key in ON position. ● Measure the voltage between the audio unit C290b pin 10, circuit 1002 (BK/PK), harness side and ground, and between the audio unit C290b pin 9, circuit 828 (VT/LB), harness side and ground.  A0025710 ● **Are the voltages greater than 10 volts?**	**Yes** GO to A5. **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
A5 CHECK THE GROUND CIRCUITS TO THE AUDIO UNIT ● Key in OFF position. ● Measure the resistance between the audio unit C290b pin 2, circuit 1205 (BK), harness side and ground; and between the audio unit C290b pin 11, circuit 694 (BK/LG), harness side and ground; and between the audio unit C290b pin 16, circuit 694 (BK/LG), harness side and ground	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the

 ● **Are the resistances less than 5 ohms?**	system for normal operation. **No** REPAIR the circuit (s) in question. TEST the system for normal operation.

PINPOINT TEST B: POOR RECEPTION

Test Step	Result / Action to Take
B1 CHECK ANTENNA CABLE CONNECTIONS	
● Key in OFF position. ● Check the antenna connections including the extension cable. ● Check to make sure the antenna is securely mounted to the vehicle body at ground points. ● **Are the connections clean, secure, and in metal-to-metal contact?**	**Yes** GO to B2 . **No** CLEAN and SECURE the antenna connections as necessary. TEST the system for normal operation.
B2 CHECK SUPPRESSION EQUIPMENT/MOUNTING AND CONNECTING CIRCUITS	
● Check all necessary suppression equipment and the radio frequency interference suppression bond. Refer to Section 415-01 . ● Check the radio receiver hood bonding strap and the body-to-chassis straps for integrity, cleanliness, and metal-to-metal contact. ● **NOTE:** The capacitor mounting points are used to complete the electrical circuit and must be mounted securely to clean surfaces. ● Check the mounting and connecting circuits of the radio ignition interference capacitor for integrity, cleanliness, and metal-to-metal contact. ● **Are the connections clean, secure, and in metal-to-metal contact?**	**Yes** GO to B3 . **No** CLEAN, SECURE, or INSTALL new suppression equipment as necessary. TEST the system for normal operation.
B3 CHECK RADIO IGNITION INTERFERENCE CAPACITOR	
● Check the operation of the radio ignition interference capacitor by substituting it with a known good component. ● Key in START position. ● Turn the audio unit on and check the radio reception.	**Yes** INSTALL a new radio ignition interference capacitor. TEST the system for normal operation. **No** GO to B4 .

• **Is the noise eliminated?**	
B4 CHECK GENERATOR	
• Key in OFF position. • Check the generator by disconnecting the wiring from the voltage regulator. • Key in START position. • Turn on the audio unit and check the radio reception. • **Is the noise eliminated?**	**Yes** INSTALL a new generator. REFER to Section 414-02 . TEST the system for normal operation. **No** GO to B5 .
B5 CHECK IGNITION CIRCUITS	
• Key in OFF position. • Check the ignition circuits for correct routing, grounding, and integrity of connections. • **Are the ignition components OK?**	**Yes** GO to B6 . **No** REPAIR the ignition system as necessary. TEST the system for normal operation.
B6 SUBSTITUTE ANTENNA	
• Substitute a known good antenna. Ground the antenna base to an unpainted metal surface on the vehicle. • Key in START position. • Verify the operation of the audio unit. • **Is the noise eliminated?**	**Yes** INSTALL a new antenna. TEST the system for normal operation. **No** GO to B7 .
B7 SUBSTITUTE ANTENNA CABLE	
• Key in OFF position. • Substitute a known good antenna cable. • Key in START position. • Verify the operation of the audio unit. • **Is the noise eliminated?**	**Yes** INSTALL a new antenna cable. TEST the system for normal operation. **No** GO to B8 .
B8 SUBSTITUTE AUDIO UNIT	
• Key in OFF position. • Substitute a known good audio unit. • Key in START position. • Verify the operation of the audio unit. • **Is the noise eliminated?**	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** GO to B9 .
B9 SUBSTITUTE SUBWOOFER AMPLIFIER	
• Key in OFF position. • Substitute a known good subwoofer amplifier. • Key in START position. • Verify the operation of the audio unit. • **Is the noise eliminated?**	**Yes** REMOVE the subwoofer amplifier and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** GO to B10 .
B10 REPOSITION COMPONENTS	
• Key in OFF position. • Determine if the noise can be eliminated by repositioning the antenna cable, speaker circuits, or audio unit power feed circuits away from other circuits or brackets. • Key in START position. • Verify the operation of the audio unit.	**Yes** Permanently REPOSITION the components as needed. TEST the system for normal operation. **No** GROUND various parts (for example, engine, fenders, quarter panels, stone deflectors, body sheet metal) of the vehicle to the frame using a

• **Is the noise eliminated?**	jumper cable. When noise is eliminated, PROVIDE a permanent ground where necessary. TEST the system for normal operation.

PINPOINT TEST C: CONTINUOUS SEEK/SCAN IN AM/FM

Test Step	Result / Action to Take
C1 CHECK OPERATION OF THE SEEK/SCAN FUNCTIONS	
• Key in ON position. • Operate the SEEK/SCAN functions with the audio unit in both AM and FM tuner modes. • **Do the SEEK/SCAN functions search continuously?**	**Yes** GO to C2 . **No** The system is OK.
C2 CHECK ANTENNA FOR DAMAGE	
• Key in OFF position. • Disconnect: Antenna Lead Terminal. • Measure the resistance between the antenna cable lead terminal and the end of the antenna grid wire. • **Is the resistance less than 8 ohms?**	**Yes** GO to C3 . **No** REPAIR the antenna. REFER to Section 415-02
C3 SUBSTITUTE ANTENNA EXTENSION CABLE	
• Substitute a known good antenna cable between the audio unit and the antenna. • Key in START position. • Check the operation of the audio unit. • **Is the noise eliminated?**	**Yes** INSTALL a new antenna extension cable. REFER to Section 415-02 . TEST the system for normal operation. **No** REINSTALL the original cable. REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

PINPOINT TEST D: NO SOUND FROM ONE OR MORE OF THE SPEAKERS — NOT ALL SPEAKERS

Test Step	Result / Action to Take
D1 CHECK FOR SOUND	
• Key in ON position. • Turn on the audio unit. • **Are all speakers without sound?**	**Yes** GO to Pinpoint Test E . **No** For convertible, GO to D2 . For coupe, GO to D4 .

	For Mach 1000 subwoofer speakers,GO to D8 .
D2 CHECK CIRCUITS BETWEEN THE AFFECTED SPEAKER(S) AND SUBWOOFER AMPLIFIERS • Disconnect: Subwoofer Amplifier C4108a. • Disconnect: Subwoofer Amplifier C4109b. • Disconnect: Affected Speaker(s). • Measure the resistance between the subwoofer amplifier and the affected speaker(s) and between the subwoofer amplifier and ground as follows: **Speaker Circuits** **Affected Speaker Pin / Subwoofer Amplifier Pin / Circuit** RF 1 (convertible only) / LH 7 / 822 (BK/LG) RF 2 (convertible only) / LH 8 / 287 (BK/WH) LF 1 (convertible only) / LH 7 / 822 (BK/LG) LF 2 (convertible only) / LH 8 / 287 (BK/WH) RR 1 / RH 7 / 822 (BK/LG) RR 2 / RH 8 / 287 (BK/WH) LR 1 / RH 7 / 822 (BK/LG) LR 2 / RH 8 / 287 (BK/WH) • **Are the resistances less than 5 ohms between the subwoofer amplifier and the affected speaker(s) and greater than 10,000 ohms between the subwoofer amplifier and ground?**	**Yes** GO to D3 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
D3 CHECK CIRCUITS BETWEEN THE AUDIO UNIT AND THE SUBWOOFER AMPLIFIERS • Disconnect: Audio Unit C290b. • Disconnect: Subwoofer Amplifier C4108a. • Disconnect: Subwoofer Amplifier C4109b. • Measure the resistance between the subwoofer amplifier and the audio unit C290b and between the subwoofer amplifier and ground as follows: **Speaker Circuits** **Audio Unit C290b Pin / Subwoofer Amplifier Pin / Circuit** 2 / LH 5 / 167 (BN/OG) 6 / RH 5 / 169 (LG/BK) 1 / LH 6 / 168 (RD/BK) 5 / RH 6 / 172 (LB/RD) • **Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit and greater than 10,000 ohms between the subwoofer amplifier and ground?**	**Yes** GO to D6 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
D4 CHECK CIRCUITS BETWEEN THE AFFECTED SPEAKER(S) AND SUBWOOFER AMPLIFIER • Disconnect: Subwoofer Amplifier C4109b. • Disconnect: Affected Speaker(s). • Measure the resistance between the subwoofer amplifier and the	**Yes** GO to D5 .

affected speaker(s) and between the subwoofer amplifier and ground as follows:

Speaker Circuits

Affected Speaker Pin	Subwoofer Amplifier Pin	Circuit
RR 1	7	822 (BK/LG)
RR 2	8	287 (BK/WH)
LR 1	7	822 (BK/LG)
LR 2	8	287 (BK/WH)

- **Are the resistances less than 5 ohms between the subwoofer amplifier and affected speaker(s) and greater than 10,000 ohms between the subwoofer amplifier and ground?**

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

D5 CHECK CIRCUITS BETWEEN THE AUDIO UNIT AND THE SUBWOOFER AMPLIFIER

- Disconnect: Audio Unit C290b.
- Disconnect: Subwoofer Amplifier C4109b.
- Measure the resistance between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and the audio unit C290a pin 6, circuit 169 (LG/BK), harness side and between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and ground; and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and the audio unit C290a pin 5, circuit 172 (LB/RD), harness side and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and ground.
- **Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit and greater than 10,000 ohms between the subwoofer amplifier and ground?**

Yes
GO to D6 .

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

D6 CHECK SPEAKER(S)

- Key in OFF position.
- Substitute the affected speaker with a known good component.
- Key in ON position.
- Turn on the audio unit.
- **Is the affected speaker(s) operational?**

Yes
INSTALL a new speaker. TEST the system for normal operation.

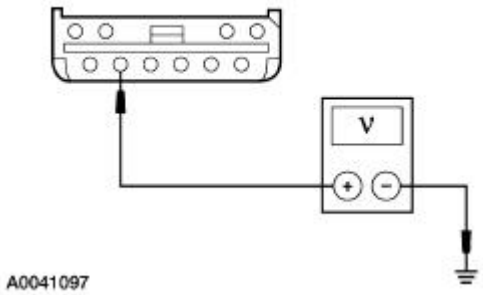
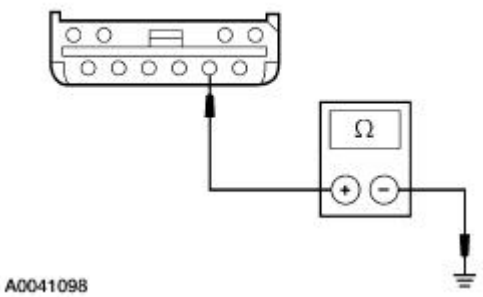
No
GO to D7 .

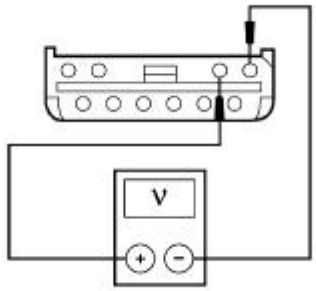
D7 CHECK THE AUDIO UNIT

- Key in OFF position.
- Substitute the affected audio unit with a known good component.
- Key in ON position.
- Turn on the audio unit.
- **Is the affected speaker(s) operational?**

Yes
SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation.

No
REMOVE the subwoofer amplifier and SEND it to an authorized Ford audio system repair facility. TEST the system

	for normal operation.
D8 CHECK FOR POWER TO THE AFFECTED SUBWOOFER AMPLIFIER	
• Key in OFF position. • Disconnect: Mach 1000 Affected Subwoofer Amplifier. • Measure the voltage between affected subwoofer amplifier pin 5, circuit 828 (VT/LB) (left amplifiers) and ground, or between pin 5, circuit 829 (WH/VT) (right amplifiers) and ground.  A0041097 • **Is the voltage greater than 10 volts?**	**Yes** GO to D9 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
D9 CHECK FOR GROUND TO THE AFFECTED SUBWOOFER AMPLIFIER	
• **NOTE:** Ground circuit 694 is located in the same cavity in all four subwoofer amplifiers. • Measure the resistance between affected subwoofer amplifier pin 2, circuit 694 (BK/LG) and ground.  A0041098 • **Is the resistance less than 5 ohms?**	**Yes** GO to D10 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
D10 CHECK FOR AN AUDIO SIGNAL TO THE AFFECTED SUBWOOFER AMPLIFIER	
• Key in ON position. • **NOTE:** Audio signal circuits 169 and 172 are located in the same cavity on all four subwoofer amplifiers. • Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer amplifier pin 8, circuit 172 (LB/RD) and pin 7, circuit 169 (LG/BK).	**Yes** GO to D12 . **No** GO to D11 .



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- **Does the voltage vary as the volume is adjusted?**

D11 CHECK AUDIO SIGNAL CIRCUITS AT THE AFFECTED SUBWOOFER AMPLIFIER FOR OPEN AND SHORT TO GROUND

- Key in OFF position.
- Disconnect: Audio Unit C290a.
- Measure the resistance between the affected subwoofer amplifier and the audio unit C290a, and between the affected subwoofer amplifier and ground as follows:

Speaker Circuits

Audio Unit C290a Pin	Subwoofer Amplifier Pin	Circuit
2	8	172 (LB/RD)
8	7	169 (LG/BK)

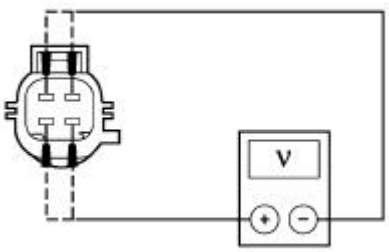
- **Is the resistance less than 5 ohms between the audio unit and subwoofer amplifier and greater that 10,000 ohms between the subwoofer amplifier and ground?**

Yes
SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation.

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

D12 CHECK FOR AN AUDIO SIGNAL AT THE AFFECTED SUBWOOFER

- Key in OFF position.
- Connect: Affected Subwoofer Amplifier.
- Disconnect: Affected Subwoofer Speaker .
- Key in ON position.
- Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer as follows: For right subwoofer pin 4, circuit 187 (DB/OG) and pin 2, circuit 189 (LG/BK) harness side; and between pin 3, circuit 179 (OR/RD) and pin 1, circuit 176 (PK/LG) harness side. For left subwoofer pin 1, circuit 187 (DB/OR) and pin 3, circuit 189 (LG/BK) harness side; and between pin 2, circuit 179 (OR/RD) and pin 4, circuit 176 (PK/LG) harness side.



A0041100

- **Does the voltage vary as the volume is adjusted?**

Yes
INSTALL a new subwoofer speaker.

No
GO to D13 .

D13 CHECK FOR AN OPEN AND SHORT TO GROUND BETWEEN THE AFFECTED SUBWOOFER AND ITS RESPECTIVE AMPLIFIERS

- Key in OFF position.

Yes

- Disconnect: Respective Amplifier to Subwoofer Speaker Connector.
- Measure the resistance between the affected subwoofer speaker and its respective amplifiers, and between the affected subwoofer speaker and ground as follows:

Speaker Circuits—Right Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)
4	3	187 (DB/OR)

Speaker Circuits—Left Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)
4	3	187 (DB/OR)

- **Is the resistance less than 5 ohms between the amplifier and subwoofer speaker and greater that 10,000 ohms between the subwoofer speaker harness and ground?**

INSTALL a new subwoofer amplifier.

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

PINPOINT TEST E: NO SOUND FROM ALL OF THE SPEAKERS

Test Step	Result / Action to Take
E1 CHECK FOR AUDIO UNIT OPERATION - Key in ON position. - Turn the audio unit on. - **Does the audio unit display illuminate?**	**Yes** GO to E2 . **No** GO to Pinpoint Test A .
E2 CHECK THE SPEAKER OPERATION - Check the operation of all speakers. - **Are all speakers inoperative?**	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

	No GO to Pinpoint Test D .

PINPOINT TEST F: POOR QUALITY SOUND FROM ONE OR MORE SPEAKERS (NOT ALL SPEAKERS)

Test Step	Result / Action to Take
F1 CHECK SOUND QUALITY	
• Key in ON position. • Turn on the audio unit. • Carry out the speaker walk-around test by pressing preset buttons 3 and 6 simultaneously. • **Do all speakers have poor sound quality?**	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** For convertible, GO to F2 . For coupe, GO to F4 . For Mach 1000 subwoofer speakers,GO to F6 .
F2 CHECK CIRCUITS BETWEEN AFFECTED SPEAKER(S) AND SUBWOOFER AMPLIFIERS	
• Disconnect: Subwoofer Amplifier C4108a. • Disconnect: Subwoofer Amplifier C4109b. • Disconnect: Affected Speaker(s). • Measure the resistance between the subwoofer amplifier and the affected speaker(s) and between subwoofer amplifier and ground as follows: **Speaker Circuits** • **Are the resistances less than 5 ohms between the subwoofer amplifier and the affected speaker(s) and greater than 10,000**	**Yes** GO to F3 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.

Affected Speaker Pin	Subwoofer Amplifier Pin	Circuit
RF 1 (convertible only)	LH 7	822 (BK/LG)
RF 2 (convertible only)	LH 8	287 (BK/WH)
LF 1 (convertible only)	LH 7	822 (BK/LG)
LF 2 (convertible only)	LH 8	287 (BK/WH)
RR 1	RH 7	822 (BK/LG)
RR 2	RH 8	287 (BK/WH)
LR 1	RH 7	822 (BK/LG)
LR 2	RH 8	287 (BK/WH)

ohms between the subwoofer amplifier and ground?

F3 CHECK CIRCUITS BETWEEN THE AUDIO UNIT AND THE SUBWOOFER AMPLIFIERS

- Disconnect: Audio Unit C290b.
- Disconnect: Subwoofer Amplifier C4108b.
- Disconnect: Subwoofer Amplifier C4109b.
- Measure the resistance between subwoofer amplifier and audio unit C290a and between subwoofer amplifier and ground as follows:

Speaker Circuits

Audio Unit C290a Pin	Subwoofer Amplifier Pin	Circuit
2	LH 5	167 (BN/OG)
6	RH 5	169 (LG/BK)
1	LH 6	168 (RD/BK)
5	RH 6	172 (LB/RD)

- **Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit and greater than 10,000 ohms between the subwoofer amplifier and ground?**

Yes
GO to F6 .

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

F4 CHECK CIRCUITS BETWEEN AFFECTED SPEAKER(S) AND SUBWOOFER AMPLIFIER

- Disconnect: Subwoofer Amplifier C4109b.
- Disconnect: Affected Speaker(s).
- Measure the resistance between subwoofer amplifier and the affected speaker(s) and between subwoofer amplifier and ground as follows:

Speaker Circuits

Affected Speaker Pin	Subwoofer Amplifier Pin	Circuit
RR 1	7	822 (BK/LG)
RR 2	8	287 (BK/WH)
LR 1	7	822 (BK/LG)
LR 2	8	287 (BK/WH)

- **Are the resistances less than 5 ohms between the subwoofer amplifier and the affected speaker(s) and greater than 10,000 ohms between the subwoofer amplifier and ground?**

Yes
GO to F5 .

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

F5 CHECK CIRCUITS BETWEEN THE AUDIO UNIT AND THE SUBWOOFER AMPLIFIER

- Disconnect: Audio Unit C290b.
- Disconnect: Subwoofer Amplifier C4109b.
- Measure the resistance between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and the audio unit C290a pin 6, circuit 169 (LG/BK), harness side and between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and ground; and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and the audio unit C290a pin 5, circuit 172 (LB/RD), harness side and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and ground.
- **Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit and greater than 10,000 ohms between the subwoofer amplifier and ground?**

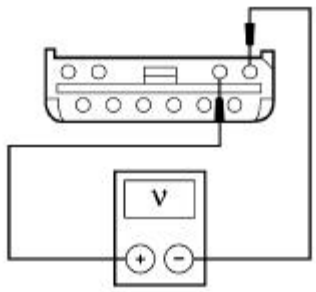
Yes
GO to F10 .

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

F6 CHECK FOR AN AUDIO SIGNAL TO THE SUBWOOFER

AMPLIFIER HARNESS

- Key in OFF position.
- Disconnect: Mach 1000 Affected Subwoofer Amplifier.
- Key in ON position.
- **NOTE:** Audio signal circuits 169 and 172 are located in the same cavity on all four subwoofers.
- Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer amplifier pin 8, circuit 172 (LB/RD) and pin 7, circuit 169 (LG/BK).



A0041099

- **Does the voltage vary as the volume is adjusted?**

Yes
GO to F8 .

No
GO to F7 .

F7 CHECK AUDIO SIGNAL CIRCUITS AT THE AFFECTED SUBWOOFER AMPLIFIER FOR OPEN AND SHORT TO GROUND

- Key in OFF position.
- Disconnect: Audio Unit C290a.
- Measure the resistance between the affected subwoofer amplifier and the audio unit C290a and between the affected subwoofer amplifier and ground as follows:

Speaker Circuits

Audio Unit C290a Pin	Affected Subwoofer Amplifier Pin	Circuit
2	8	172 (LB/RD)
8	7	169 (LG/BK)

- **Is the resistance less than 5 ohms between the audio unit and subwoofer amplifier harness and greater that 10,000 ohms between the subwoofer amplifier harness and ground?**

Yes
SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation.

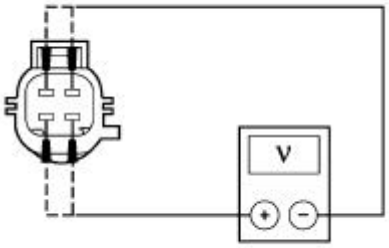
No
REPAIR the circuit (s) in question. TEST the system for normal operation.

F8 CHECK FOR AN AUDIO SIGNAL AT THE AFFECTED SUBWOOFER

- Key in OFF position.
- Connect: Affected Subwoofer Amplifier.
- Disconnect: Affected Subwoofer Speaker.
- Key in ON position.
- Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer as follows: For right subwoofer pin 4, circuit 187 (DB/OG) and pin 2, circuit 189 (LG/BK) harness side; and between pin 3, circuit 179 (OR/RD) and pin 1, circuit 176 (PK/LG) harness side. For left subwoofer pin 1, circuit 187 (DB/OR) and pin 3, circuit 189 (LG/BK) harness side; and between pin 2, circuit 179 (OR/RD) and pin 4, circuit 176 (PK/LG) harness side.

Yes
INSTALL a new subwoofer speaker

No
GO to F9



A0041100

- **Does the voltage vary as the volume is adjusted?**

F9 CHECK FOR AN OPEN AND SHORT TO GROUND BETWEEN THE AFFECTED SUBWOOFER AND ITS RESPECTIVE AMPLIFIERS

- Key in OFF position.
- Disconnect: Affected Subwoofer.
- Disconnect: Respective Amplifier.
- Measure the resistance between the affected subwoofer speaker and its respective amplifiers, and between the affected subwoofer speaker and ground as follows:

Speaker Circuits—Right Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)
4	3	187 (DB/OR)

Speaker Circuits—Left Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)
4	3	187 (DB/OR)

- **Is the resistance less than 5 ohms between the amplifier and subwoofer speaker and greater that 10,000 ohms between the subwoofer speaker harness and ground?**

Yes
INSTALL a new subwoofer amplifier.

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

F10 CHECK SPEAKER(S)

- Key in OFF position.
- Substitute the affected speaker with a known good component.
- Key in ON position.

Yes
INSTALL a new speaker. TEST the

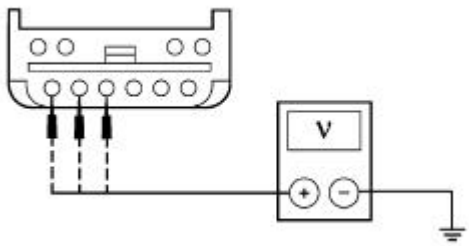
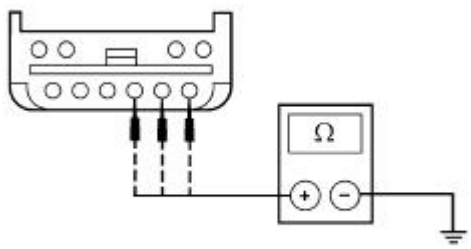
• Turn on the audio unit. • **Is the sound quality OK?**	system for normal operation. **No** GO to F7 .
F11 CHECK THE AUDIO UNIT	
• Key in OFF position. • Substitute the affected audio unit with a known good component. • Key in ON position. • Turn on the audio unit. • **Is the sound quality OK?**	**Yes** SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** REMOVE the subwoofer amplifier and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

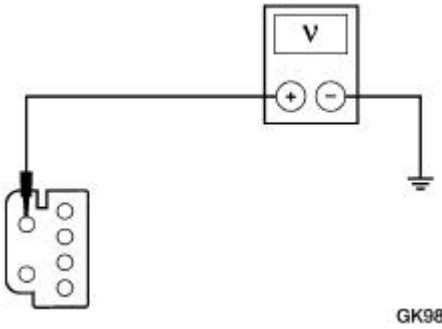
PINPOINT TEST G: POOR QUALITY SOUND FROM ALL SPEAKERS

Test Step	Result / Action to Take
G1 CHECK POOR SOUND QUALITY IN ALL SPEAKERS	
• Key in ON position. • Turn on the audio unit. • Carry out the speaker walk-around test by pressing preset buttons 3 and 6 simultaneously. • **Is there poor quality or distortion in all speakers?**	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** GO to Pinpoint Test F .

PINPOINT TEST H: THE SUBWOOFER IS INOPERATIVE

Test Step	Result / Action to Take
H1 CHECK THE SUBWOOFER OPERATION	
• Key in ON position. • Turn on the audio unit and listen for correct subwoofer operation. • **Are all subwoofers inoperative?**	**Yes** GO to H16 . **No** For convertible, GO to H2 . For coupe, GO to H6 .

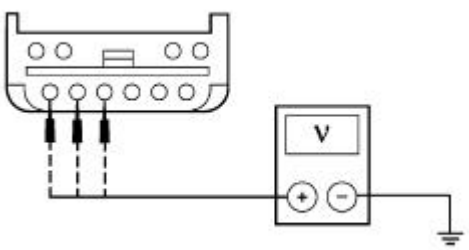
	For Mach 1000 subwoofer speakers,GO to H10 .
H2 CHECK POWER TO THE SUBWOOFER AMPLIFIERS ● Key in OFF position. ● Disconnect: LH Subwoofer Amplifier C4108a. ● Disconnect: RH Subwoofer Amplifier C4109b. ● Key in ON position. ● Turn on the audio unit. ● Measure the voltage between the subwoofer amplifiers pin 4, circuit 828 (VT/LB), harness side and ground; and between the subwoofer amplifiers pin 5, circuit 828 (VT/LB), harness side and ground; and between the subwoofer amplifiers pin 6, circuit 828 (VT/LB), harness side and ground.  GK9835-A ● **Are the voltages greater than 10 volts?**	**Yes** GO to H3 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H3 CHECK GROUND TO THE SUBWOOFER AMPLIFIERS ● Measure the resistance between the subwoofer amplifiers C4108a (LH) or C4109a (RH) pin 1, circuit 694 (BK/LG), harness side and ground; and between the subwoofer amplifiers C4108a (LH) or C4109a (RH) pin 2, circuit 694 (BK/LG), harness side and ground; and between the subwoofer amplifiers C4108a (LH) or C4109a (RH) pin 3, circuit 694 (BK/LG), harness side and ground.  GK9836-A ● **Are the resistances less than 5 ohms?**	**Yes** GO to H4 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H4 CHECK THE SUBWOOFER AMPLIFIER ENABLE CIRCUIT FOR POWER ● Key in OFF position. ● Disconnect: Subwoofer Amplifier C4109b. ● Disconnect: Subwoofer Amplifier C4108b. ● Key in ON position. ● Turn the audio unit on. ● Measure the voltage between the LH subwoofer amplifier C4108b pin 2, circuit 173 (DG/VT), harness side and ground; and between the RH subwoofer amplifier C4109b pin 2, circuit 174 (GY/BK), harness side and ground.	**Yes** GO to H5 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.



GK9837-A

- **Is voltage indicated?**

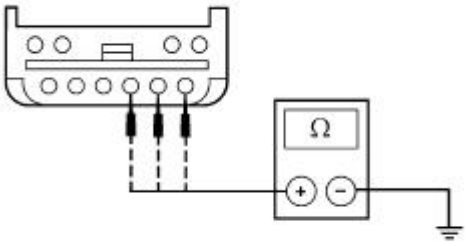
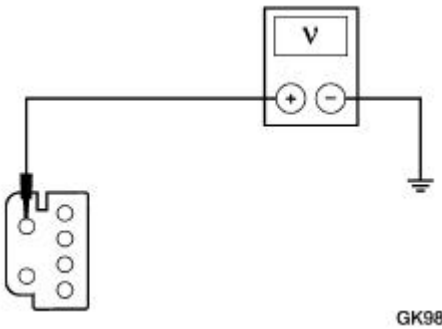
H5 CHECK THE AUDIO UNIT	
• Substitute a known good audio unit. • Verify the operation of the audio unit. • **Does the audio unit operate correctly?**	**Yes** SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** REMOVE the subwoofer amplifier and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.
H6 CHECK THE VOLTAGE TO THE SUBWOOFER AMPLIFIER	
• Key in OFF position. • Disconnect: Subwoofer Amplifier C4109b. • Key in ON position. • Turn on the audio unit. • Measure the voltage between the subwoofer amplifier C4109b pin 5, circuit 828 (VT/LB), harness side and ground; between the subwoofer amplifier C4109b pin 6, circuit 828 (VT/LB), harness side and ground; and between the subwoofer amplifier C4109b pin 7, circuit 828 (VT/LB), harness side and ground.	**Yes** GO to H7 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.

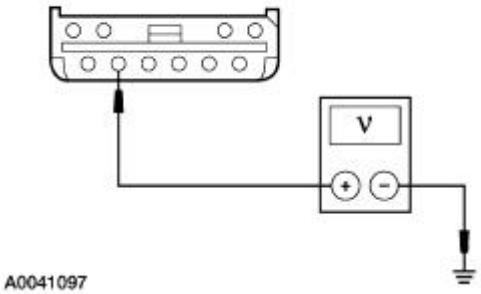
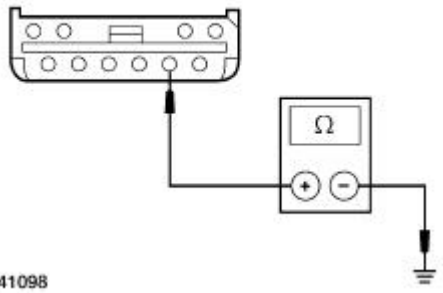
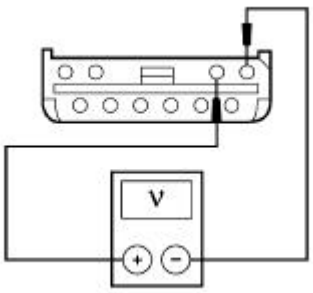


GK9835-A

- **Are the voltages greater than 10 volts?**

H7 CHECK THE GROUND TO THE SUBWOOFER AMPLIFIER	
• Measure the resistance between the subwoofer amplifier C4109b pin 1, circuit 694 (BK/LG), harness side and ground; between the	**Yes** GO to H8 .

subwoofer amplifier C4109b pin 2, circuit 694 (BK/LG), harness side and ground; and between the subwoofer amplifier C4109b pin 3, circuit 694 (BK/LG), harness side and ground.  GK9836-A • **Are the resistances less than 5 ohms?**	**No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H8 CHECK THE SUBWOOFER ENABLE CIRCUIT FOR POWER	
• Key in OFF position. • Disconnect: Subwoofer Amplifier C4109b. • Key in ON position. • With the audio unit turned on, measure the voltage between the subwoofer amplifier C4109b pin 2, circuit 173 (DG/VT), harness side and ground.  GK9837-A • **Is voltage indicated?**	**Yes** GO to H9 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H9 CHECK CIRCUITS BETWEEN THE AUDIO UNIT AND THE SUBWOOFER AMPLIFIER	
• Disconnect: Audio Unit C290b. • Disconnect: Subwoofer Amplifier C4109b. • Measure the resistance between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and the audio unit C290a pin 6, circuit 169 (LG/BK), harness side and between the subwoofer amplifier C4109b pin 5, circuit 169 (LG/BK), harness side and ground; and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and the audio unit C290a pin 5, circuit 172 (LB/RD), harness side and between the subwoofer amplifier C4109b pin 6, circuit 172 (LB/RD), harness side and ground. • **Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit and greater than 10,000 ohms between the subwoofer amplifier and ground?**	**Yes** GO to H10 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H10 CHECK FOR POWER TO THE AFFECTED SUBWOOFER AMPLIFIER	
• Key in OFF position. • Disconnect: Mach 1000 Affected Subwoofer Amplifier. • Measure the voltage between affected amplifier harness pins 1 and 2, circuit 828 (VT/LB) (left amplifiers) and ground, and between pins 4 and 5, circuit 829 (WH/VT) (right amplifiers) and ground.	**Yes** GO to H11 . **No** REPAIR the circuit (s) in question. TEST the system for normal

 A0041097 ● **Is the voltage greater than 10 volts?**	operation.
H11 CHECK FOR GROUND TO THE SUBWOOFER AMPLIFIER HARNESS	
● **NOTE:** Ground circuit 694 is located in the same cavity in all four subwoofer amplifiers. ● Measure the resistance between subwoofer amplifier pins 2, circuit 694 (BK/LG) and ground.  A0041098 ● **Is the resistance less than 5 ohms?**	**Yes** GO to H12 . **No** REPAIR the circuit (s) in question. TEST the system for normal operation.
H12 CHECK FOR AN AUDIO SIGNAL TO THE AFFECTED SUBWOOFER AMPLIFIER	
● Key in ON position. ● **NOTE:** Audio signal circuits 169 and 172 are located in the same cavity on all four subwoofers. ● Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer amplifier pin 8, circuit 172 (LB/RD) and pin 7, circuit 169 (LG/BK).  A0041099 ● **Does the voltage vary as the volume is adjusted?**	**Yes** GO to H14 . **No** GO to H13 .
H13 CHECK AUDIO SIGNAL CIRCUITS AT THE AFFECTED SUBWOOFER AMPLIFIER FOR OPEN AND SHORT TO GROUND	
● Key in OFF position. ● Disconnect: Audio Unit C290a. ● Measure the resistance between the affected subwoofer amplifier and the audio unit C290a, and between the affected subwoofer amplifier and ground as follows:	**Yes** SEND the audio unit to an authorized Ford audio system

Speaker Circuits

Audio Unit C290a Pin	Subwoofer Amplifier Harness Pin	Circuit
2	8	172 (LB/RD)
8	7	169 (LG/BK)

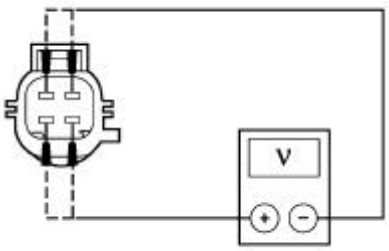
- **Is the resistance less than 5 ohms between the audio unit and subwoofer amplifier harness and greater that 10,000 ohms between the subwoofer amplifier harness and ground?**

repair facility. TEST the system for normal operation.

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

H14 CHECK FOR AN AUDIO SIGNAL AT THE AFFECTED SUBWOOFER

- Key in OFF position.
- Connect: Affected Subwoofer Amplifier.
- Disconnect: Affected Subwoofer Speaker.
- Key in ON position.
- Turn on the audio unit and check for a fluctuating AC voltage between affected subwoofer as follows: For right subwoofer pin 4, circuit 187 (DB/OG) and pin 2, circuit 189 (LG/BK) harness side; and between pin 3, circuit 179 (OR/RD) and pin 1, circuit 176 (PK/LG) harness side. For left subwoofer pin 1, circuit 187 (DB/OR) and pin 3, circuit 189 (LG/BK) harness side; and between pin 2, circuit 179 (OR/RD) and pin 4, circuit 176 (PK/LG) harness side.



A0041100

- **Does the voltage vary as the volume is adjusted?**

Yes
INSTALL a new subwoofer speaker.

No
GO to H15 .

H15 CHECK FOR AN OPEN AND SHORT TO GROUND BETWEEN THE AFFECTED SUBWOOFER AND ITS RESPECTIVE AMPLIFIERS

- Key in OFF position.
- Disconnect: Affected Subwoofer.
- Disconnect: Respective Amplifier.
- Measure the resistance between the affected subwoofer speaker and its respective amplifiers, and between the affected subwoofer speaker and ground as follows:

Speaker Circuits—Right Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)

Yes
INSTALL a new subwoofer amplifier.

No
REPAIR the circuit (s) in question. TEST the system for normal operation.

4	3	187 (DB/OR)

Speaker Circuits—Left Side

Affected Subwoofer Speaker Pin	Respective Amplifier Pin	Circuit
1	4	176 (PK/LG)
3	3	179 (OR/RD)
2	4	189 (TN/LB)
4	3	187 (DB/OR)

- **Is the resistance less than 5 ohms between the amplifier and subwoofer speaker and greater that 10,000 ohms between the subwoofer speaker harness and ground?**

H16 CHECK THE AUDIO UNIT	
• Substitute a known good audio unit. • Verify the operation of the audio unit. • **Does the audio unit operate correctly?**	**Yes** SEND the audio unit to an authorized Ford audio system repair facility. TEST the system for normal operation. **No** REMOVE the subwoofer amplifier and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

PINPOINT TEST I: LOUD POPPING WHEN CYCLING THE IGNITION SWITCH—CONVERTIBLE

Test Step	Result / Action to Take
I1 CHECK SUBWOOFERS FOR LOUD POPS	
• Key in ON position. • Listen to see whether the loud pops are from the LH or RH subwoofer amplifiers for the convertible. • **Are the pops from both subwoofer**	**Yes** REMOVE the audio unit and SEND it to an authorized Ford audio system repair facility. TEST the system for normal operation.

amplifiers for the convertible?	**No** If the loud pops are from the convertible LH subwoofer amplifier only, REPAIR circuit 173 (DG/VT). TEST the system for normal operation. If the loud pops are from the convertible RH subwoofer amplifier only, REPAIR circuit 174 (GY/BK). TEST the system for normal operation.

Torque Specifications

Description	Nm	lb-ft	lb-in
Battery ground cable bolt	10	—	89
Amplifier bracket to body nut	25	18	—

Audio System

The Mustang is available with the following audio systems:

- M100 CD AM/FM
- CDX6-AM/FM with six CD in-dash
- MP3 single CD AM/FM (optional)

The M100 system is equipped with four premium speakers. The CDX6 six disc changer audio unit comes with the Mach 460 or Mach 1000 systems and speed-sensitive volume control. The Mach 460 system consists of eight speakers and two subwoofer amplifiers. The Mach 1000 option adds two additional subwoofers and four additional amplifiers located in the luggage compartment.

Refer to the owner literature for complete audio system operating controls and functions.

Audio System

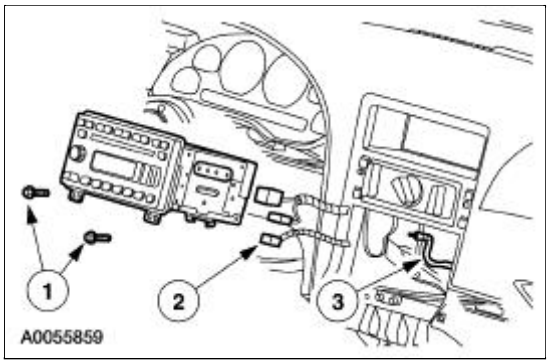
Refer to Section 415-00 .

Audio Unit

Removal and Installation

1. Remove the instrument panel center finish panel. For additional information, refer to Section 501-12 .

2. Remove the audio unit.
    1. Remove the screws.
    2. Disconnect electrical connectors.
    3. Disconnect antenna cable.



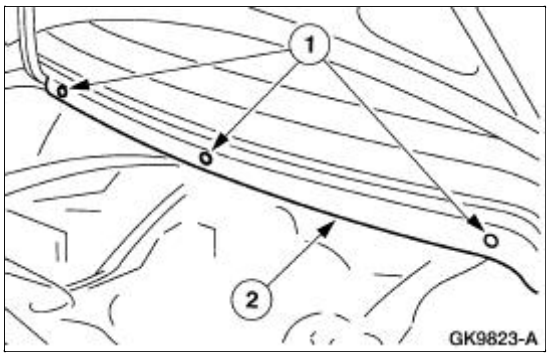
3. To install, reverse the removal procedure.

Subwoofer Amplifier —Convertible

Removal and Installation

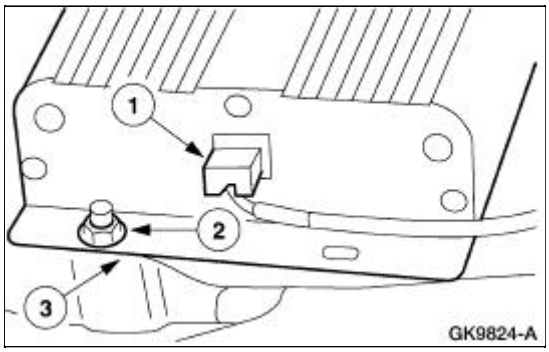
1. **NOTE:** The convertible top needs to be in the up position to remove the subwoofer amplifiers.

   From inside the luggage compartment, remove the forward panel.
   1. Remove the pin-type retainers.
   2. Remove the forward panel.



2. **NOTE:** LH and RH subwoofer amplifiers are similar.

   Remove the subwoofer amplifiers.
   1. Disconnect the electrical connectors.
   2. Remove the nuts.
   3. Remove the subwoofer amplifiers.

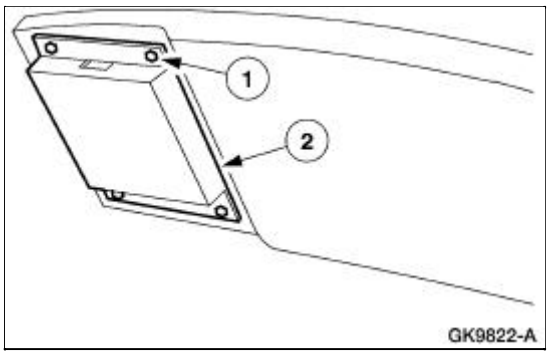


3. To install, reverse the removal procedure.

Subwoofer Amplifier —Coupe

Removal and Installation

1. Remove the subwoofer amplifier.
    1. Remove the screws.
    2. Remove the subwoofer amplifier.

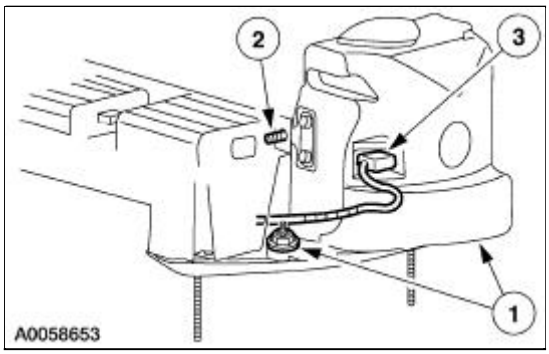


2. To install, reverse the removal procedure.

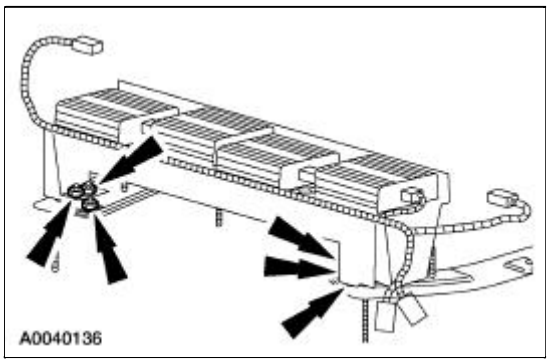
Subwoofer Amplifier —Mach 1000

Removal and Installation

1. Remove the subwoofer assembly.
    1. Remove the two attaching nuts.
    2. Remove the screw.
    3. Disconnect the electrical connectors.



2. Remove the subwoofer amplifiers.
    - Remove the bracket-to-body attaching nuts.
    - Disconnect the electrical connectors.



3. To install, reverse the removal procedure.

Torque Specifications

Description	Nm	lb-in
Battery ground cable	10	89

Antenna

The antenna system consists of:

- antenna mast
- antenna base and cable
- antenna lead-in cable

The radio antenna uses a two-piece coaxial cable to connect the audio unit to the antenna. The front antenna lead-in cable is connected to the audio unit and has an in-line connector at the RH cowl side.

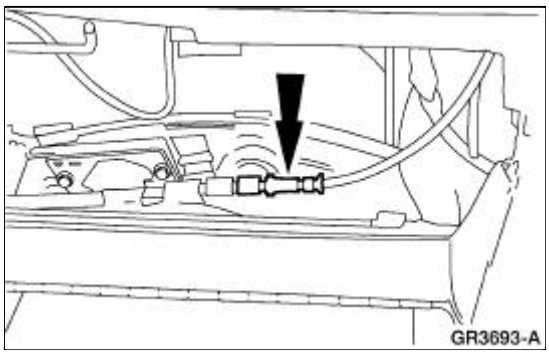
Antenna

Refer to Section 415-00 .

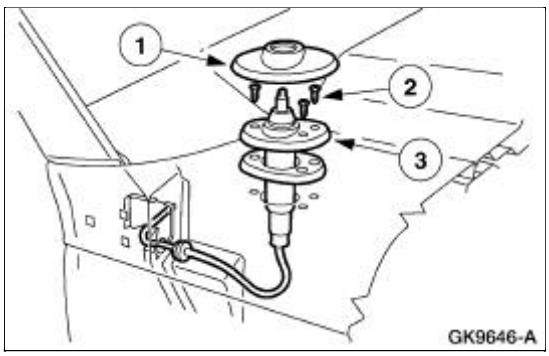
Antenna

Removal

1. Lower the glove compartment by releasing the stops from the instrument panel.
2. Disconnect the antenna in-line connector.



3. Remove the antenna base and cable.
    1. Remove the radio antenna base cap.
    2. Remove the screws.
    3. Remove the antenna base and cable.
        - Disconnect the antenna cable grommet.



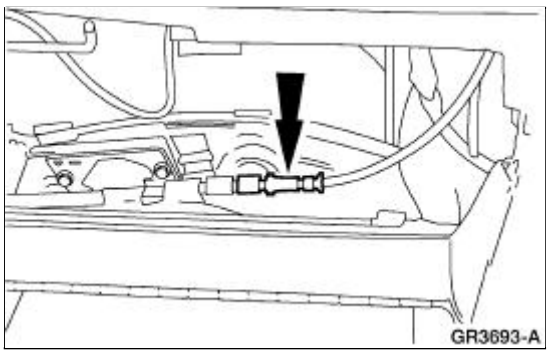
Installation

1. To install, reverse the removal procedure.

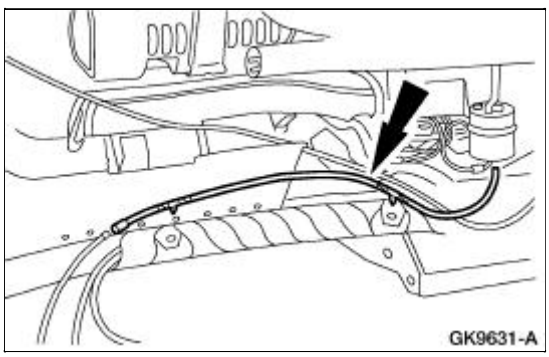
Cable —Antenna Lead In

Removal

1. Remove the audio unit. Refer to Section 415-01 .
2. Lower the glove compartment by releasing the stops from the instrument panel.
3. Disconnect the antenna in-line connector.



4. Remove the antenna lead in cable.
    1. Disconnect the pin-type retainers.
    2. Remove the antenna lead in cable.



Installation

1. To install, reverse the removal procedure.

Torque Specifications

Description	Nm	lb-ft	lb-in
Subwoofer nut (coupe)	10	—	89
Subwoofer nut (Mach 1000)	25	18	—

Speakers

NOTE: Premium sound speakers (18808) are labeled with either 6 OHMS or 8 OHMS.

- The coupe has a four-speaker system, with two door-mounted speakers and two in the package tray panel (46506).
- On the convertible, the two rear speakers are located behind the quarter trim panel. (31012)
- The MACH 460 subwoofer system has eight speakers. On the coupe, two are located in each door and four are in the subwoofer assembly. On the convertible, two speakers are in each door and two are mounted in each subwoofer assembly behind the rear quarter trim panels. Both the coupe and convertible subwoofer assemblies are not repairable.
- The MACH 1000 has all the components of the MACH 460 system plus two additional subwoofers located on each side of the trunk and four additional amplifiers. These subwoofers can be serviced independently.

Speakers

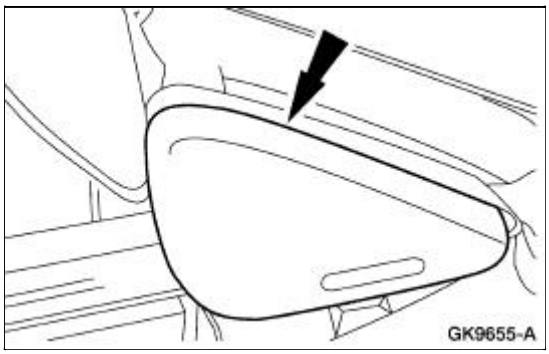
Refer to Section 415-00 .

Door Speaker —Upper

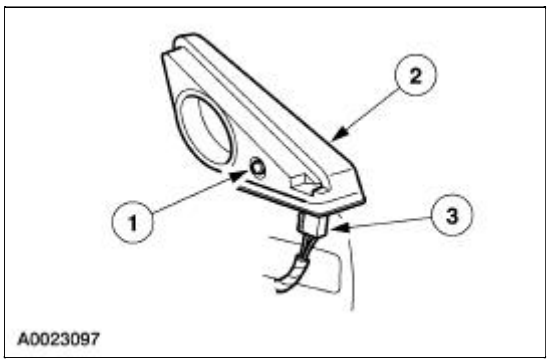
Removal and Installation

1. Remove the front door trim panels (239420). For additional information, refer to Section 501-05 .

2. Remove the upper speaker access cover.



3. Remove the upper speaker housing.
    1. Remove the screw.
    2. Remove the upper speaker housing.
    3. Disconnect the electrical connector.



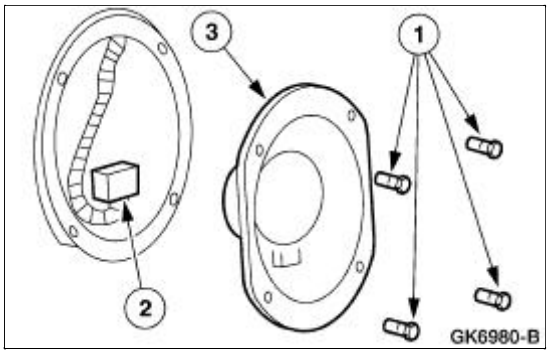
4. To install, reverse the removal procedure.

Door Speaker —Lower

Removal and Installation

1. Remove the front door trim panel (239420). For additional information, refer to Section 501-05 .

2. Remove the speaker (18808).
    1. Remove the screws.
    2. Disconnect the electrical connector.
    3. Remove the speaker.



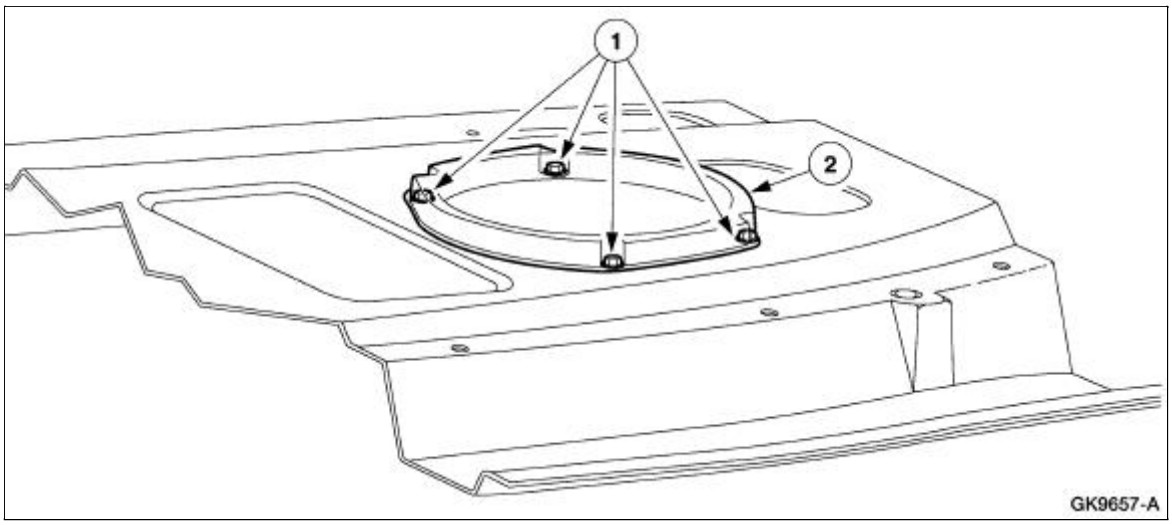
3. To install, reverse the removal procedure.

Speaker —Package Tray (Coupe)

Removal and Installation

1. Remove the package tray trim panel. Refer to Section 501-05 .

2. Remove the speaker.
   1. Remove the screws.
   2. Remove the speaker.
      - Disconnect the electrical connector.

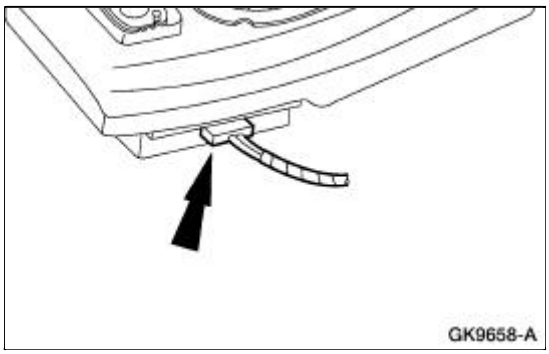


3. To install, reverse the removal procedure.

Subwoofer Speaker —Coupe

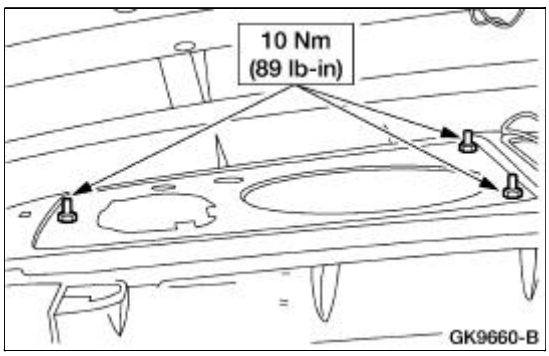
Removal and Installation

1. Remove the package tray trim panel. For additional information, refer to Section 501-05 .
2. Disconnect the two subwoofer assembly amplifier electrical connectors.



3. **NOTE:** Do not let the subwoofer assembly fall into the luggage compartment; support the subwoofer assembly before removing the fasteners.

   Remove the six nuts.
   - From inside the luggage compartment, remove the subwoofer assembly.
   - Transfer the amplifiers to the new subwoofer assembly.



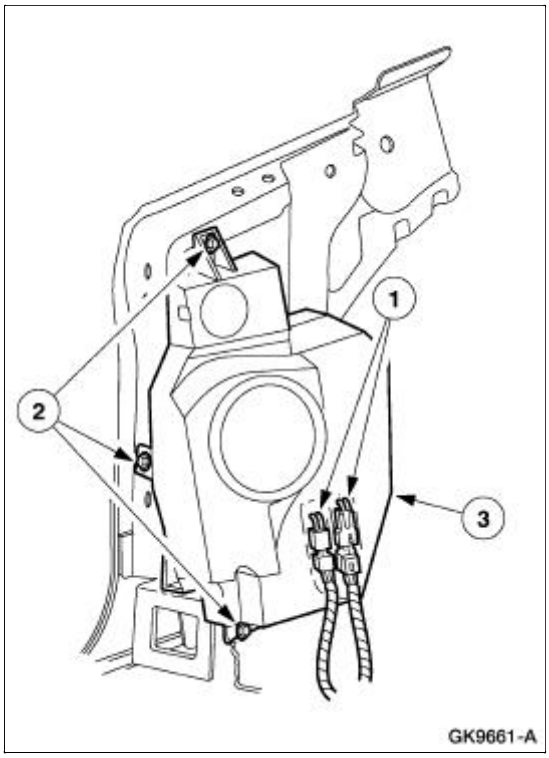
4. To install, reverse the removal procedure.

Subwoofer Speaker —Convertible

Removal and Installation

1. Remove the rear quarter trim panel. For additional information, refer to Section 501-05 .

2. Remove the subwoofer assembly.
    1. Disconnect the electrical connectors.
    2. Remove the screws.
    3. Remove the subwoofer assembly.



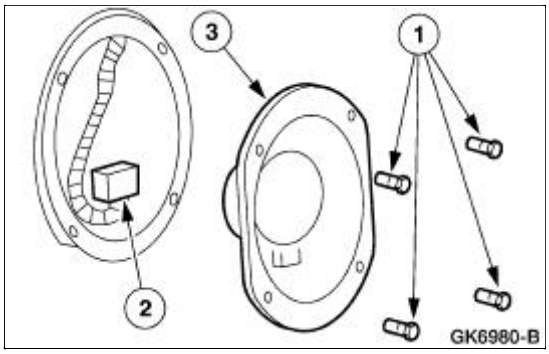
3. To install, reverse the removal procedure.

Quarter Panel Speaker

Removal and Installation

1. Remove the rear quarter trim panel. For additional information, refer to Section 501-05 .

2. Remove the speaker (18808).
    1. Remove the screws.
    2. Disconnect the electrical connector.
    3. Remove the speaker.



3. To install, reverse the removal procedure.